

Susan M. Bolton, Ph.D., P.E.
College of Forest Resources, Box 352100
Forest Mgt. and Engineering Div. and Center for Streamside Studies
University of Washington, Seattle, WA 98195-2100
(206) 685-7651 fax: (206) 685-3091 sbolton@u.washington.edu
<http://depts.washington.edu/cssuw/>

EDUCATION

- Ph.D. Civil Engineering, August 1991, New Mexico State University, Las Cruces, NM.
- M.S. Civil Engineering, May 1985, New Mexico State University, Las Cruces, NM.
- M.S. Zoology, June 1979, North Dakota State University, Fargo, ND
- B.S. with Distinction, Organismic Biology, May 1976, University of Colorado, Boulder, CO.

THESES AND DISSERTATION

- Multivariate Analysis of Bird Habitat in a Ponderosa Pine Forest. North Dakota State University, 1979.
- Application of Nutrient Models to New Mexico Reservoirs. New Mexico State University, 1985.
- A Methodology for Predicting Water, Sediment and Nutrients from New Mexico Watersheds. New Mexico State University, 1991.

CERTIFICATION

- Registered Professional Engineer (Washington No. 0031521)
- Registered Professional Engineer (New Mexico No. 11464)
- Engineering Intern Certification, 1984

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- International Assoc. of Hydrologic Sciences
- American Water Resources Association; Terrene Institute, News group on nonpoint source pollution
- Watershed Management Council; Am. Geophysical Union

PROFESSIONAL ACTIVITIES

- Organizing Committee Society for Ecological Restoration, Restoration Symposium, Bellevue, WA April 01
- Session moderator, ASCE Watershed Management Symposium, Fort Collins, CO 6/00, AWRA meetings Portland 9/00, Int'l Meeting on Wood in Rivers, Corvallis, OR 10/00
- Organizing Committee the Int'l Conference on Wood in Rivers, 10/00
- Past Chair, Watershed Mgt. Tech. Committee, EWRI, Am. Soc. Of Civil Engineers, Oct. 1999-present
- Chair, Watershed Management Technical Committee, Water Resources Engineering Div. of ASCE, Oct. 1997-Oct 1999
- Vice-Chair, Watershed Management Technical Committee Water Resources Engineering Div. of ASCE, Oct. 1995-1997
- Secretary, Watershed Management Technical Committee Irrigation and Drainage Div. of ASCE, Oct. 1993-Sept. 1995
- Mentor, Humphrey Fellow Program, Sept 1995 to present
- Mentor, Women in Science and Engineering UW Sept 1999-present
- Organizing Committee, ASCE Watershed Management Symposium August 1995
- Moderator, Watershed Workshop Management Series, EPA November 1992-July 1993
- Reviewer, New Mexico Water Resources Research Inst., J. of Irrigation and Drainage (ASCE), USDA National Research Initiative; NSF/EPA Water and Watersheds Proposals; Water Resources Research;

- Northwest Science; Earth Surface Processes and Landforms; Ecological Engineering
- Riparian Areas Research Cooperative, Planning workshop Feb. 28, 1997. Olympia, WA

SHORT COURSES ATTENDED

- Process Based Channel Design, Oct. 9-13, 2000, Interfluve
- Applied Fluvial Geomorphology, Oct. 21-Oct.25, 1991 - Dave Rosgen
- HEC-1 Short Course, August 6-August 10, 1990 - David Ford

HONORS AND AWARDS

- First place tie recipient for "Dissertation Thesis Award for Outstanding Water Resources Dissertation in the Field of Engineering and Physical Sciences" June 1992. Awarded by the Universities Council on Water Resources.
- Chi Epsilon 1987, New Mexico State University
- Phi Kappa Phi Honor Society 1983, New Mexico State University
- Phi Beta Kappa Honor Society 1976, University of Colorado

WORK EXPERIENCE

- Director, Center for Streamside Studies, 1998-present
- Corkery Chair, CFR University of Washington 1998-present
- Interim Director, Center for Streamside Studies, University of Washington, Dec 1996 to 1998
- Rayonier Associate Professor in Watershed Management. College of Forest Resources, University of Washington Sept. 1996 to present
- Rayonier Assistant Professor in Watershed Management. College of Forest Resources, UW Sept. 1994 to Sept. 1996
- I.T.T. Rayonier Research Assistant Professor in Watershed Management. Sept. 1992 - Sept. 1994. College of Forest Resources, Center for Streamside Studies and Division of Forest Management and Engineering. UW
- College Asst. Professor- August 1991 to May 1992. Dept. of Civil, Ag. and Geol. Engineering, N.M. State University.
- Engineer III - August 1991 through August 1992. Dept. of Civil Engineering, New Mexico State University. Conducted and coordinated research projects dealing with surface water hydrology, nonpoint source water quality, and computer modeling of hydrologic systems.
- Engineer I- July 1985 through July 1991 Dept. of Civil Engineering, New Mexico State University. Assisted principal investigators on interdisciplinary project on modeling the major river basins in New Mexico

Consulting Activity

- Panel review, 2000, USDA Research Program Washington, D.C.
- April, 1999. USFS, blind review of Forest Plan.
- Panel review, 1997. NSF/EPA Water and Watersheds, Washington, D.C.
- April, 1997:Crater Lake National Park, Panel member to help define research at the park relative to management needs.
- May, 1996: Talk on logging effects on flooding to the Lewis County Economic Development Council
- September, 1994: Observer on a Washington Department of Natural Resources ID team for the Lake Cavanaugh Improvement Association. Prepared comments on proposed forest harvest around the lake
- March-April, 1986: Worked for Dynaspan Services at White Sands Missile Range. I prepared a portion of an Environmental Assessment which included sections on geology and soils, air and water quality and hazardous waste disposal.

- Sept. 1981: Worked for Whitford Ecological Consultants. I performed literature reviews, field reconnaissance and data analysis for EIS preparation.

GRANTS AND CONTRACTS

- 9/87-9/90 Co-principal Investigator, Develop Parameter Values to Determine the Hydrologic Properties of Southwestern Soils. USDA Forest Service RMS.
- 7/91-6/92 Co-PI, Analysis of Relationships between Lightning, Precipitation, and Runoff.
- 10/92-9/93 Co-PI, Watershed Management Workshop Series Workplan. EPA, Region 10, Seattle, WA.
9/92-12/95 Principal Investigator, Watershed Analysis. USDA Forest Service, PNW.
- 10/92-9/94 PI, Land Use Effects on Water Quality, USDA, MacIntire-Stennis Coop Forestry Funds.
- 6/93-6/96 PI, Cumulative Effects and Water Quality USDA Forest Service, PNW.
- 6/93-8/95 Co-PI, Hydrology Component of the MAB Project, Dept. of State, UNESCO
- 7/93-12/01 PI, Hydrology Component of the DEMO Project, USDA Forest Service, PNW.
- 7/93-7-95 Co-PI, Slope Stability Modeling from a Landscape Perspective, USDA Forest Service, PNW
- 7/94-9/96 Co-principal Investigator, Development of Stream Instrumentation, USDA Forest Service, RM
- 6/94-6/96 PI, Stream Habitat Restoration in a River Basin: Prioritizing Rehabilitation Options USDA Forest Service, PNW
- 5/94-6/96 PI, Comparison and Evaluation of Watershed Analysis Procedures, USDA Forest Service, PNW
- 7/95-6/97 PI, Investigation of Peak Summer Temperature and Sources of Headwater Streams USDA FS, PNW
- 7/95-6/98 PI, Stream Habitat Restoration in a Large Basin: Prioritizing Rehabilitation Options US EPA
- 7/95-6/97 PI, Investigation of Wheel rut depth and length on sediment production USDA Forest Service, INT
- 8/98-12/02 PI, (CSS), Wood Compatibilities Initiative, USFS PNW
- 6/97-6/00 Co-PI, Working at a Watershed Level, Watershed Management Training Course, US EPA
- 4/99-7/99 Co-PI, Review of TFW Monitoring Guidelines, Northwest Indian Fisheries Commission
- 8/99-12/01 PI, Evaluation of Stream Changes following flooding in a small forested watershed in N. Idaho. Potlatch Corporation and NCASI
- 8/99-12/03 PI, Riparian Bibliography, USDA USFS, Stream Technology Center
- 8/99-12/01 PI, Evaluation of Road Abandonment at Stream crossings. USDA USFS Rocky Mt. Res. Stn.
- 2/00-12/01 PI Fish Culvert Passage. WA DOT
- 3/00-05/01 PI Riparian Corridor White Paper. WA DOT
- 10/00-12/01 PI Salmon and Turbidity White Paper. WA DOT

PAPERS AND PRESENTATIONS

Invited presentations

- Bolton, S. and M. Liquori. What has the timber industry done to respond to the ESA listings? American Society of Civil Engineers, National Meeting Seattle, WA Oct. 14, 2000.
- Bolton, S. Oct. 5, 2000. Invited presentation to brownbag at Parametrix, Bellevue. Restoration and ecological Engineering.
- Videotape presentation for OR project to develop a Soils For Salmon presentation Portland, August 2000
- Bolton, S. Basics of Stormwater Hydrology. Workshop on Stormwater Management, Seatac, Oct 25, 1999
- Bolton, S. Hydrology 101: Comparing water cycles in forests And urban development Soils for Salmon, Tacoma Oct. 6, 1999
- Bolton, S. and A. Watts. Results from Forest Hydrology Studies: Is there a Lesson for Urban Planners?

Salmon in the City, May 1998, Mt. Vernon, WA.
 Bolton, S. What do soils have to do with salmon? Soils for Salmon, March 1999
 Bolton, S., S. Bergen, J. Fridley. 1999. 'Principles of Ecological Engineering' presented at the Workshop on Ecological Considerations in Hydraulic Engineering Projects April 1999, Taichung, Taiwan
 Bolton, S. and T. Beechie. 1999. 'Prioritization of restoration Activities', presented at the Workshop on Soil Conservation and Stream Habitat Protection, April 1999, Taichung, Taiwan
 Speaker, King Co. Conservation District, Forestry Forum Nov. 10, 1998.
 Speaker for MEI Productions video tape on forestry issues, Feb. 1997
 Speaker, TFW Type 4&5 Waters Workshop, Oct. 16, 1996
 Speaker, Silviculture Institute, Pack Forest Sept. 1995
 Speaker, Olympic Natural Resource Center, Natural Resources Forum, Aberdeen, WA April 18, 1995
 Speaker, Olympic Natural Resource Center, Natural Resources Forum, Forks, WA October 11, 1994
 Speaker, Snohomish County Surface Water Management Symposium Series- August 1993

Presented Papers/Posters

Storck, P. S. Bolton, D. Lettenmaier. 2000. Trees, Snow and Flooding: Forest Canopy Effects on Snow Accumulation and Melt in the Pacific Northwest. 2000. Poster and abstract presented at the Fall meeting Am. Geophysical Union, San Francisco, CA.
 Bonser, Y.J., S.M. Bolton, P. X. Storck. 2000. Spatial Analysis of the Effects of Green-Tree Retention on Snowfall Accumulation and Snow-Water Equivalent in the Oregon Cascades. Poster and abstract presented at the Fall meeting Am. Geophysical Union, San Francisco, CA
 Liquori, M., C.R. Jackson, D. Montgomery, S. Bolton. 2000. An Examination of Montgomery & Buffington Channel Classes as Applied to Headwater Streams. Poster and abstract presented at the Fall meeting Am. Geophysical Union, San Francisco, CA
 Beechie, T., G. Pess, P. Kennard, R. Bilby, and S. Bolton. 2000. Modeling rates and pathways of recovery for woody debris Recruitment in northwestern Washington streams. Paper presented at the First Int'l Conference on Wood in World Rivers, Corvallis, OR Oct 23-27, 2000.
 Fox, M.J., L. Conquest, S. Bolton, P. Bisson. 2000. In-stream wood in old growth forested drainages: A characterization based on geomorphic variation. Paper presented at the First Int'l Conference on Wood in World Rivers, Corvallis, OR Oct 23-27, 2000.
 Bolton, S. 2000. Watershed Design: Principles for training students for the future. Paper presented at ASCE Watershed Management symposium, Fort Collins, CO. June, 2000.
 O'Neal, J., A. Watts, S. Bolton and T. Sibley. 1999. A Comparison of the Hydraulic and Biological Effects of Large Woody Debris and an Engineered Alternative. Paper presented at the ASCE 1999 Int'l Water Resources Engineering Conf. Aug 8-11, 1999, Seattle WA.
 Bolton, S., Storck, P. and T. Kern. 1999. Summary of Hydrology Work for DEMO. Green Tree Retention Workshop for USFS district personnel, Feb 25-26, 1999, Sandy, OR
 Black, J. and S. Bolton. Temperature issues in headwater Streams. Poster and abstract at Headwater '98. Meran, Italy
 Storck, P., Lettenmaier, D., T. Kern and S. Bolton. 1998. Measurement and Modeling of snow interception and its ultimate fate in the Pacific Northwest. Poster and abstract presented at the Fall meeting Am. Geophysical Union.
 Bolton, S. A. Watts, T. Sibley, and J. Dooley. 1998. A pilot Study examining the effectiveness of engineered large woody debris (Elwd™) as an interim solution to lack of LWD in streams. Poster and abstract presented at the Fall meeting Am. Geophysical Union
 Paulson, K., O. Hamel, and S. Bolton. 1998. Variable influence Of lithology, landform, and land use on mass-wasting rates Across a landscape, North Cascades, WA. Poster and abstract presented at the Fall meeting Am. Geophysical Union

- Storck, P., T. Kern and S. Bolton. 1998. Measurement of Differences in snow accumulation, melt and micrometeorology due to forest harvesting. Poster presented at Ann. Mtg NW Science March 1998.
- Bergen, S., S.M. Bolton and J. Fridley. 1997. Development of an Ecological Engineering Program at the University of Washington. Paper presented at the ASEE Annual Conf. June 15-18 Milwaukee, WI.
- Storck, P., S. Bolton and T. Kern. 1997. Measurement of Differences in Snow Accumulation, Melt, and Micrometeorology Between Clear-cut and Mature Forest Stands. Poster presented at the Joint Meeting of the CGU-Hydrology Section, Western Snow Conference, and Eastern Snow Conference. May 4-9, 1997, Banff, Alberta, Canada
- Achet, S. and S.M. Bolton. 1996. An Integrated approach to modeling the impact of timber harvest on streamflow: A GIS-based hydrological model. Paper presented at the 1996 ASAE Annual Int'l Meeting, Phoenix AZ June 17-21.
- Storck, P., S. Bolton and T. Kern. 1996. Measurement of Differences in Snow Accumulation, Melt, and Micrometeorology Between Clear-cut and Mature Forest Stands. Paper presented at the 1996 Fall meeting of the Am. Geophysical Union.
- Bolton, S.M., S.J. King, and S. Achet. 1996. Hydrologic Modeling for a Land Use Change Analysis System (LUCAS). Paper presented at the Symposium on Society and Resource Management. May 20-23, Pennsylvania State University.
- King, S.J. and S.M. Bolton. 1995. A distributed watershed model for the prediction of annual sediment load. Paper presented at the ASCE Watershed Management Symposium, San Antonio, TX. Aug. 14-18.
- Pickford, S., S.M. Bolton, F. Greulich, J. Fridley. 1995. An Impact-of-Instruction Approach to Curriculum Evaluation. Paper presented at the 1995 ASAE Annual Int'l Meeting, Chicago, IL. June 18-23.
- Bolton, S.M. and T.J. Ward. 1995. Hydrologic Component of a Resource Planning Model. Paper presented at the IUGG, XXI General Assembly, Boulder, CO. July 2-14, 1995
- King, S.J. and S.M. Bolton. 1994. Sediment delivery and water quality in a changing landscape. Paper presented at the AWRA Annual Summer Symposium: Effects of Human-induced Changes on Hydrologic Systems. June 26-29, 1994, Jackson Hole, WY.
- Bolton, S.M. and S.J. King. 1994. Modeling the interaction between land use patterns and water resources. Paper presented at the Fifth Int'l Symposium on Society and Resource Management. June 7-10, 1994, Fort Collins, CO.
- Bolton, S.M. and S.J. King. 1994. The realities of modeling hydrology at a landscape scale. Paper presented at the International Workshop on the Ecology and Management of Aquatic-Terrestrial Ecotones. Feb. 13-19, 1994, Seattle, WA.
- Bolton, S.M. and S.J. King. 1994. Modeling the landscape level effects of land use on water resources. Presentation at the Center for Streamside Studies Annual Review, Jan. 27, 1994, Seattle, WA.
- Bolton, S.M. and T.J. Ward. 1993. Scale effects of sediment related transport of phosphorus. Paper presented at the IAWQ Conference on Diffuse Pollution. Sept. 20-24, 1993, Chicago, Illinois.
- Ward, T.J., K.A. Stevens, and S.M. Bolton. 1993. Estimating runoff from lightning data: A case history. Paper presented at the ASCE National Conference on Irrigation and Drainage Engineering. July 21-23, 1993, Park City, Utah.
- Ward, T.J., R.A. Cole, S.M. Bolton, F.A. Ward, and K.A. Green-Hammond. 1992. RIOFISH: An interdisciplinary planning model for water and fishery management. Paper presented at the Envirosoft 92 Conference. Sept. 7-9, 1992, Portsmouth, UK
- Bolton, S., T.J. Ward, and J. S. Krammes. 1991. Hydrologic processes in the Pinyon-Juniper Vegetation Zone of Arizona and New Mexico. Paper presented at the 36th New Mexico Water Conference: Agencies and Science Working for the Future, Nov. 7-8 1991, Las Cruces, NM.
- Bolton, S. Surface Water Relationships in the Rio Grande. 1991. Paper presented at the American Water Resources Association, New Mexico Section Meetings: Rio Grande Basin Hydrology. Socorro, NM Sept. 18-19, 1991.

- Bolton, S. and T.J. Ward. 1991. Temporal and spatial effects on infiltration. Paper presented at New Mexico Section of ASCE, Las Cruces, New Mexico, April 19, 1991 Bolton, S., T.J. Ward, and W. Whitford. 1990. Rainfall infiltration and loss on a bajada in the Chihuahuan desert, New Mexico. Paper presented at the Int'l Symposium on the Hydraulics/Hydrology of Arid Lands, San Diego, CA, July 30-Aug. 3, 1990.
- Bolton, S., T.J. Ward, and R. Cole. 1990. Rainfall simulation studies of nutrient export from watersheds in Arizona and New Mexico. Paper presented at the ASCE Watershed Management Symposium, Durango, CO, July 9-11, 1990.
- Ward, T.J., J.S. Krammes, and S. Bolton. 1990. A comparison of runoff and sediment yields from bare and vegetated plots using rainfall simulators. Paper presented at the ASCE Watershed Mgt. Symposium, Durango, CO, July 9-11, 1990.
- Bolin, S. Bolton, 1990. Sediment-related transport of nutrients. Paper presented at the Annual Meeting of the Am. Soc. of Agricultural Engineers, New Mexico Section, Water Quality and Conservation in New Mexico. Las Cruces, New Mexico, Feb. 23, 1990.
- Cole, R.A., T.J. Ward, and S. Bolton Bolin. 1989. Estimating the allochthonous organic loading of New Mexico reservoirs. Paper presented at the 10th Conference of the North American Lake Management Society, Austin, Texas, November 9-11, 1989.
- Ward, T.J., S. Bolton Bolin, E.F. Aldon, and R.A. Cole. 1989. A comparison of runoff and erosion Processes using large and small area rainfall simulators. Paper presented at the New Mexico Section of the American Water Resource Association Conference on Advances in Management of Southwestern Watersheds, Socorro, NM, Sept. 14-15, 1989.
- Bolin, S. Bolton, S. Van Vactor, T.J. Ward, and A. Blair. 1989. Temporal patterns of arid land rainstorms for runoff simulation. Paper presented at the Annual Meeting of the SW-Rocky Mountain Division of the American Assoc. for the Advancement of Science, Las Cruces, NM, April 1989.
- Bolin, S. Bolton and T.J. Ward. 1987. Cover effects on runoff-erosion processes on desert lands. Paper presented at the Symposium on Strategies for Classification and Management of Native Vegetation for Food Production in Arid Zones, Tucson, Arizona, October, 1987.
- Bolin, S. Bolton and T.J. Ward. 1987. Recovery of a New Mexico drainage basin from a forest fire. Paper presented at the XIX IUGG General Assembly, Vancouver, B.C., Canada, August, 1987.
- Bolin, S. Bolton, and T.J. Ward. 1985. Preliminary analyses and comparisons of sediment yield data from the Jornada LTER, New Mexico. Paper presented at the LTER Sediment Workshop in Grafton, Illinois, September 16-18, 1985.
- Bolin, S. Bolton, T.J. Ward and R.A. Cole. 1985. Application of phosphorus models to New Mexico reservoirs. Paper presented at the ASCE Specialty Conference: Computer Applications in Water Resources in Buffalo, NY. June, 1985.

Working Papers and Reports

- Bolton, S. and J. Shellberg. 2000. Draft of White Paper on Salmon Habitat Protection and Restoration Standards and Guidelines for Floodplain and Riparian Corridor Issues. Submitted to WA DOT and WA WDFW.
- Bolton, S. and T. Sibley. 1999. Review of the TFW Monitoring Program: Watershed-Scale Monitoring Pilot Project
- Olsen, P. and S.M. Bolton. 1996. Final Report for USDA USFS PNW Project 94-0516. An evaluation of federal watershed Analysis in Region 6.
- King, S.J. and S.M. Bolton. 1996. Final Report for USDA USFS PNW Project 92-0260. Watershed analysis.
- Paul, J. and S.M. Bolton. 1996. Final Report for USDA USFS PNW Project 93-0364. Cumulative Effects and Water Quality.
- Ward, T.J. and S. Bolton. 1991. Modification and Testing of a Portable Rainfall Simulator. Completion Report for U.S. Forest Service, Tempe, AZ, Dec. 1991.

- Cole R.A., R.A. Deitner, S.M. Bolton, F. Ward, J. Fiore, and T. Ward. 1991. Completion of Performance Report as Federal Aid Project F-53-R-13, Study 801, New Mexico Dept. of Game and Fish, Santa Fe, NM June 15, 1991.
- Ward, T.J. and S. Bolton. 1990. Hydrologic Characteristics of Querencia and San Mateo Soils near San Ysidro, New Mexico. Completion Report for U.S. Forest Service, Albuquerque, NM, Dec. 1990.
- Cole, R.A., F.A. Ward, T.J. Ward, R.A. Deitner, S.M. Bolton and J. Fiore. 1990. Analysis of Central Arizona Angler Opportunity and Benefits Gained by Installing Artificial Habitat in Saguaro Lake, Based on Adaptation of the Comprehensive Management Planning Model, RIOFISH, Completion Report for Tonto National Forest, U.S.F.S. USDA, Sept. 1990.
- Anderson, J., S. Bolton, J. Cornelius, J. Franklin, L. Huenneke, W. Jarrell, D. Lightfoot, E. Muldavin, J. Reynolds, W. Schlesinger, T. Ward, W. Whitford. 1990. Desertification: Processes and implications, Jornada LTER II. Progress Report 1989-1990, National Science Foundation.
- Cole, R.A., F.A. Ward, T.J. Ward, R.A. Deitner, J. Fiore, and S. Bolton Bolin. 1989(July). Computer Model Application in New Mexico, Final report (1985-1989) Federal Aid Project F-53-12, prepared for NM Dept. of Game and Fish, Santa Fe, NM
- Ward, T.J. and S. Bolton Bolin. 1989. Model Analysis of Reservoir Management Scenarios. Project Report to U.S. Army COE, Albuquerque, NM, March 15, 1989.
- Ward, T.J. and S. Bolton Bolin. 1988. Analyses of Surface Water Data from the Rio Grande Basin: Preliminary Report covering Reservoir Gains, Losses and Loss Coefficients for Heron, El Vado, Abiquiu, Cochiti, Elephant Butte, and Caballo Reservoirs. Project Report to U.S. Army COE, Albuquerque, NM, Sept. 30, 1988.
- Ward, T.J. and S. Bolton Bolin. 1988. Analyses of Surface Water Data from the Rio Grande Basin: Preliminary Report covering San Acacia to San Marcial Low-Flow Conveyance Channel Analysis, Transfer Functions for Selected Stream Gages and Reservoir Gains, Losses and Loss Coefficients for Abiquiu and Cochiti Reservoirs. Project Report to U.S. Army COE, Albuquerque, NM, Sept. 1, 1988.
- Cole, R., F. Ward, T. Ward, R. Deitner, S. Bolton Bolin, J. Fiore, R. Tafañelli, and G. Desmare. 1988. Computer model application in New Mexico. Performance Rep. Fed. Aid Project F-53-R-8, Federal Aid in Fish Restoration Act, July 30, 1988.
- Bolin, S. Bolton and T.J. Ward. 1987. An analysis of runoff and sediment yield from natural rainfall plots in the Chihuahuan Desert. Pp 196-200 in USDA Forest Service, Strategies for Classification and Management of Native Vegetation for Food Production in Arid Zones, General Technical Report RM-150, December 1987.
- Bolin, S. Bolton and T.J. Ward. 1986. Preliminary analyses and comparisons of sediment yield data from the New Mexico LTER site, in Adams, J.R. (ed.), Sediment Movement at LTER Sites: Mechanics, Measurement, and Integration with Hydrology. Illinois State Water Survey Division, SWS Contract Report 387.
- Cole, R.A., F. Ward, T. Ward, R. Deitner, J. Fiore, S. Bolton Bolin and K. Green-Hammond. 1986. Model for Optimization of Socio-Economic Values on the Rio Grande. Ann. Project Report to N.M. Game and Fish, September.
- Cole, R., F. Ward, T. Ward, R. Deitner, J. Fiore, and S. Bolton Bolin. 1986. Computer model application in New Mexico. Performance Report Federal Aid Project F-53-R-7, Federal Aid in Fish Restoration Act.
- Cole, R., F. Ward, T. Ward, R. Deitner, J. Fiore, S. Bolton Bolin and K. Green-Hammond. 1985. Model for Optimization of Socio-economic Values on the Rio Grande. Final Report for Federal Aid Project F-52, Federal Aid in Fish Restoration Act.

Published Papers

Bolton, S., J. Fridley, and S. Bergen. (In press). Ecological Engineering: Design based on ecological

- principles. *Ecol. Eng.* (Forthcoming)
- Beechie, T., G. Pess, P. Kennard, R. Bilby, and S. Bolton. 2000. Modeling recovery rates and pathways for woody debris recruitment in Northwestern Washington streams. *NA J of Fisheries Mgt.* 20: 436-452.
- Bolton, S. 2000. (invited submission) Riparian areas: What are they and why do we care about them? *Western Forester* 45(4):1,5. (Reprinted in *Forest Stewardship Notes* 9(2):4.
- Bolton, S. 2000. (Invited submission) Watershed Design: Principles for training students for the future. In *CD-ROM Proceedings, ASCE Watershed Management Symposium*, Fort Collins, CO.
- O'Neal, J.S, A. Watts, S. Bolton and T. Sibley. 2000. A comparison of the hydraulic and biological effects of large woody debris and an engineered alternative. In *CD-ROM Proc. ASCE 1999 Int'l Water Resources Engineering Conf.* Aug 8-11, 1999. Seattle WA.
- Beechie, T. and S. Bolton. 1999. An approach to restoring salmonid habitat-forming processes in Pacific Northwest Watersheds. *Fisheries* 24(4):6-15
- Storck, P., T. Kern and S. Bolton. 1999. Measurement of differences in snow accumulation, melt and micrometeorology due to forest harvesting. *NW Sci. (Sp.Iss)*:87-101.
- Storck, P., S. Bolton and T. Kern. 1997. Measurement of Differences in Snow Accumulation, Melt, and Micrometeorology Between Clear-cut and Mature Forest Stands. *Proceedings, 65th Western Snow Conference.*
- Bolton, S.M. and T.J. Ward. 1995. Hydrological component of a resource planning model, pp. 339-346 in Simonovic, S.P, Z. Kundzewicz, D. Rosbjerg, and K. Takeuchi, eds. *Modelling and Management of Sustainable Basin-scale Water Resources Systems*, IAHS Pub. No. 231, Wallingford, UK.
- Cole R.A., T.J. Ward, F.A. Ward, R.A. Deitner, R.W. Rodden, S.M. Bolton, and K.A. Green-Hammond. 1995. *RIOFISH: A Comprehensive Management System Model for New Mexico Sport-fisheries*. New Mexico Water Resources Research Institute, Technical Completion Report No. 291, N.M. State University, Las Cruces, NM.
- King, S.J. and S.M. Bolton. 1995. A distributed watershed model for the prediction of annual sediment load, pp. 37-46 in Ward, T.J. (ed.) *Watershed Management: Planning for the 21st Century*. Am. Soc. of Civil Eng., New York, NY
- Bolton, S.M. and T.J. Ward. 1993. Scale effects of sediment-related transport of phosphorus. *Water Science and Technology* 28(3-5):473-481.
- Gosz, J.R., D.I. Moore, H.D. Glover, W. Rison, C. Rison, T.J. Ward, K.A. Stevens, and S.M. Bolton, 1993. Analysis of relationships between lightning, precipitation, and runoff. *New Mexico Water Resources Research Institute Report No. 276*, New Mexico State University, Las Cruces, NM.
- Bolton, S., T.J. Ward, and J.S. Krammes. 1992. Hydrologic processes in the Pinyon-Juniper vegetation zone of Arizona and New Mexico, pp. 31-44 in C.T. Klett (ed.) *Proceedings, 36th Annual New Mexico Water Conference: Agencies and Science Working for the Future*. Las Cruces, NM, Water Resources
- Ward, T.J., R.A. Cole, S.M. Bolton, F.A. Ward, and K.A. Green-Hammond. 1992. *RIOFISH: An interdisciplinary planning model for water and fishery management*, pp. 611-625 in P. Zannetti (ed.) *Computer Techniques in Environmental Studies IV*. Elsevier Applied Science, London.
- Bolton, S., T. Ward, and R. Cole. 1991. Sediment-related transport of nutrients from Southwestern watersheds. *J. Irrigation and Drainage*, 117(5):1-18.
- Ward, T.J. and S. Bolton. 1991. Hydrologic parameters for selected soils in Arizona and New Mexico as determined by rainfall simulation. *New Mexico Water Resources Research Institute, Technical Completion Report No. 259*, New Mexico State University, Las Cruces, NM.
- Bolton, S., T. Ward, and W. Whitford. 1990. Rainfall infiltration and loss on a bajada in the Chihuahuan desert, New Mexico. Pp. 349-355 in R. French (ed.) *Hydraulics/Hydrology of Arid Land*, ASCE, New York.
- Bolton, S., T. Ward, and R. Cole. 1990. Rainfall simulation studies of nutrient export from watersheds in Arizona and New Mexico. Pp. 432-442 in R. Riggins, E.B. Jones, R. Singh, and P. Rechard, (eds.) *Watershed Planning and Analyses in Action*, ASCE, New York, New York.

- Cole, R., T. Ward, and S. Bolton. 1990. Estimating intermittent runoff concentrations of organic matter and the allochthonous organic loads of New Mexico reservoirs. *Lake and Reservoir Management*, 6(2):187-196.
- Cole, R.A., T. Ward, F. Ward, R. Deitner, S. Bolton and K. Green-Hammond. 1990. RIOFISH, A fishery management planning model for New Mexico reservoirs. New Mexico Water Resources Research Institute Report No. 253.
- Green-Hammond K., R. Cole, F. Ward, T. Ward, S. Bolton, R. Deitner, and J. Fiore. 1990. User's guide for RIOFISH, A fishery management model for New Mexico reservoirs. New Mexico Water Resources Research Institute Report No. 252.
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- Bolin, R.C. and S. Bolton Bolin. 1984. Sociobiology and sociology: Issues in applicability, pp. 3-22. In P. Barchas, ed., *Hierarchies and Physiological Processes*, Greenwood Press, Westport, CT.
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CONFERENCES

- State-of-the-Art Ecological Engineering Conference, April 30-May 2, 2001.
- International Conference on Wood in Rivers, Oct. 2000. Corvallis, OR
- AWRA, Riparian Symposium, Portland, OR. August 2000.
- ASCE Watershed Management Symposium, June 2000, Fort Collins, CO.
- Summit 2000 March 29-30 Olympia, WA
- Soils for Salmon, Feb. 29, 2000, Vancouver, WA
- Workshop on WDFW Streambank Stability Guidelines, Lacey, WA Feb 16, 2000
- WFLPA annual meeting, Oct. 28, 1999, Seattle WA
- NCASI Annual West Coast meeting, Sept. 30, 1999, Portland, OR

- Soils for Salmon, October 1999, Tacoma, WA
- Connections of the Salmon: Regional solutions, Sept 10, 1999, Seattle, WA
- 1999 Int'l Water Resources Engineering Conf. Aug 8-11, 1999, Seattle WA
- Workshop on Ecological Considerations in Hydraulic Engineering Projects April 1999, Taichung, Taiwan
- Workshop on Soil Conservation and Stream Habitat Protection, April 1999, Taichung, Taiwan
- Soils for Salmon, March 1999, Seattle, WA
- Institute for Resources and the Environment, UBC, 3rd Annual workshop: Action in Water Resource Management: Barriers and Bridges in Governance, Feb. 1999.
- Green-tree Retention Workshop: Interdisciplinary Information for Forest Managers, Feb. 1999. Sandy, OR.
- American Geophysical Union, Fall Meeting Dec. 1998
- AWRA Washington Division Fall meeting. Economy, Salmon, Agriculture: Where is the Water? November, 1998, Seattle
- Society for Ecological Restoration, Riparian Symposium. Oct. 1998, Tacoma, Washington.
- WFPA and WFCFA annual meeting, Fish, Water and Wildlife: Where do we go from here? October, 1998.
- Headwater '98. April 1998, Merano, Italy.
- Third Annual Lake Washington Workshop, Dec. 1997, Bellevue, WA
- AWRA, Washington Division Fall Meeting, Balancing instream needs with out-of-stream demands. Nov. 1997, Seattle, WA
- WFPA Annual meeting, Forests and Fish: Meeting the Challenge. Oct. 1997, Seatac, WA.
- Watershed Planning Symposium, Rivers Council Tacoma, WA June 17, 1997
- Riparian and Alternative Silviculturalists: Riparian Reference System Workshop, Feb. 27, 1997. Portland, OR
- 1996 ASAE Annual Int'l Meeting, Phoenix, AZ July 15-21, 1996.
- ASCE Watershed Management Committee meeting. June 23, 1996. Anaheim, CA
- Sixth International Symposium on Society and Resource Management. May 20-22, 1996, State College, PA.
- Pacific Northwest Salmon: Technology Applications Workshop EPA, March 26-27, 1996.
- ASCE Watershed Management Symposium, San Antonio, TX. Aug. 14-18, 1995.
- IUGG, XXI General Assembly, Boulder, CO. July 2-14, 1995
- 1995 ASAE Annual Int'l Meeting, Chicago, IL. June 18-23, 1995.
- Fifth International Symposium on Society and Resource Management. June 7-10, 1994, Fort Collins, CO.
- Current Water Resources Issues in Western Washington. Seattle Section, ASCE, March 16, 1994, Seattle, WA.
- Int'l Workshop on the Ecology and Management of Aquatic-Terrestrial Ecotones. Feb. 13-19, 1994, Seattle, WA.
- First International Conference on Diffuse (Nonpoint) Pollution: Sources, Prevention, Impact, and Abatement. Sept. 19-24, 1993, Chicago, IL.
- Watershed Resources: Balancing Environmental, Social, Political and Economic Factors in Large Basins. Oct. 14-16, 1992. Portland, Oregon.
- New Mexico Water Conference: Agencies and Science Working for the Future, Nov. 7-8, 1991. Las Cruces, NM. New Mexico Water Res. Institute, 36th annual meeting.
- American Water Resources Association, New Mexico Section Meetings: Rio Grande Basin Hydrology. Socorro, NM Sept. 18-19, 1991.
- New Mexico Section of ASCE, Las Cruces, New Mexico, April 19, 1991
- ASCE Hydraulics Division. 1990. National Conference on Hydraulic Engineering and the International Symposium on the Hydraulics/Hydrology of Arid Lands. San Diego, CA, July 30 - Aug 3, 1990.

- Committee on Watershed Management of the Irrigation and Drainage Div. of the Am. Society of Civil Engineers. Watershed Planning and Analysis in Action, Durango, CO, July 9-11, 1990.
- American Society of Agricultural Engineers, New Mexico Section. Water Quality and Conservation in New Mexico. Las Cruces, New Mexico, Feb. 23, 1990.
- American Water Resources Association, New Mexico Section. Advances in Management of Southwestern Watersheds, Socorro, New Mexico, Sept. 14-15, 1989.
- International Union of Geodesy and Geophysics, XIX General Assembly, Vancouver, Canada, August 9-22, 1987
- Western Region Dam Safety Seminar. Organized by the Association of State Dam Safety Officials, Santa Fe, NM, April 9-10, 1987.
- Symposium on Drainage Basin Sediment Delivery. Organized by the IAHS Int'l. Commission on Continental Erosion, Albuquerque, NM, August 4-8, 1986.
- New Mexico Water Conference, Megatrends in Water Resources. October 24-25, Las Cruces, New Mexico